

Past Three Years Shows Notable Development in Santa Fe Motive Power

During the past three years the motive power department of the Santa Fe system, acting in conjunction with the Baldwin locomotive works, has developed a most interesting series of locomotives, namely, Pacific type locomotives for express, passenger service. This series now includes engines which have been distributed over different parts of the system. These locomotives are generally alike, but the details have been improved in successive orders to better meet the requirements of the service.

The Santa Fe has long recognized, not only the advantages to be derived from compounding, such as increased capacity and economy, but also the fact that compound locomotives must be suitable for the service, intelligently handled and properly maintained. This policy has been persistently carried out, and to it the success of the balance compounds is largely due. The Pacific type locomotives to which reference has been made, embody a cylinder arrangement first introduced in locomotives of the Prairie type which were built for fast freight service in 1898. The inside or high pressure cylinders are elevated and inclined so that their main rods pass above the first driving axle. This arrangement preserves the simplicity of the original Vauclain balanced compound, and at the same time avoids the necessity of using bifurcated inside rods in order to clear the first driving axle.

Thirty-five locomotives constitute the order now under notice. Of these, 14 burn oil, 29 bituminous coal and one Gallop coal, which is a species of lignite. The bituminous coal burners are further divided into two groups, differences being made in the grates to suit different qualities of fuel. Wherever practicable, the details of these engines interchange with corresponding parts of locomotives already in service; this having been the policy of the road in designing all recent power.

These locomotives are the first balanced compounds built by the Baldwin locomotive works to be equipped with Baker valve gear. The parts composing the gear are of vanadium steel, and they are supported in a cradle which is placed outside the leading drivers. The Ragonnet power reverse mechanism is applied. The piston valves are 15 inches in diameter, and one valve controls the distribution to each pair of cylinders. The high pressure lead is $\frac{1}{4}$ inch and the low pressure lead $\frac{1}{2}$ inch. Vacuum relief valves are applied, but no bypass is used. As the high pressure sections of the valves are arranged for inside admission, the steam pipes can be placed outside, delivering steam to the centers of the steam chest.

The frames are open hearth annealed steel castings, and the main sections are 5 inches in width, as compared to 4½ inches for the previous locomotives of this class. The width between frame centers is 44 inches. At the main driving pedestals each frame is offset $\frac{1}{2}$ inch, thus

increasing the width between centers to 6½ inches. This is done to provide more room for the crank axle. The offset in the upper rail is made in ten steps to facilitate a more symmetrical arrangement of spring hangers. The crank axle is of the seven-piece, built-up type, a design which has given better results in service than any other form used on this road. The trailing truck is of the Bushnell type, with outside journals.

In all the locomotives of the series, the transverse bracing has received particular attention, and the difficulties which are always seen in bracing the frames of an inside combustion engine have been successfully overcome. The guide rods brace the frame just above the leading axle, carrying the load and also serving as supports for the forward end of the inside guides. Between the first and rear pairs of driving wheels is a brace which has a long bearing on the upper frame rail, and extends the full depth of the first driving pedestal. This brace carries the vertical motion lever and supports the lower end of the inside guides, and is formed of two bars which are bolted through the inside main rods plates. The frames are also braced between the main and rear driving wheels and under the front end of the fire box. The brake cylinders are supported by a steel casting which is placed immediately back of the cylinder saddle, and which strengthens the frames at that point. This arrangement of cross-ties provides ample strength and rigidity to resist the stresses occurring in service.

The boiler is of the extended wagon-top type, with a maximum inside diameter of 82 1/8 inches. The coal burning locomotives are equipped with brick arches and power-operated grate shakers. In the oil burners, the Booth burner is used; and it is placed in the front end of the fire box. The tank above the oil burner is forced outward, thus keeping the river tubes in the water space. A copper calcining strip is inserted between the crown and side sheet and the back sheet. In both the coal and oil burning boilers, the mud ring is horizontal, and is carried on sliding bearings at each end.

A feature to be noted is the air-horn which is placed just ahead of the fire box. The shell operating under this dome is of sufficient size to enable a man to enter the boiler for inspection purposes.

The tenders are carried on two commonwealth steel trucks, each of the six-wheeled type. Similar trucks have been successfully used under tenders previously built for this road. Excess wheel loading is thus avoided, and in the case of the oil tanks, the tank capacity is 15,000 gallons and each tender approximates 200,000 in total weight. $5\frac{1}{2} \times 10$ inch journals can be used with moderate unit pressure.

These engines are the result of careful and persistent study, with a view of producing a powerful and efficient locomotive, specially fitted to meet the severe operating conditions encountered on the Santa Fe system. The results of development, design and work points have been obtained and the new locomotives unquestionably represent one of the most refined designs thus far produced in this country.

TRACTION COMPANY WILL FIGHT TO UPSET CASE

Notice of Intention to Ask for New Trial Filed After Mrs. Palmer Is Awarded \$1,600 Damages.

A verdict for \$1,600 was awarded Mrs. Ardith Palmer in her suit for damages against the Albuquerque Traction company in the district court. The jury returned a sealed verdict this morning.

Mrs. Palmer sued to recover for injuries sustained when she was compelled to open trap in a trolley car. Counsel for the defense gave notice of intention to ask for a new trial. Mrs. Palmer asked for \$5,000 damages.

Judge M. C. Mechem continued on the bench for the next case, First National bank against Stoer.

Francisco Alises and Urbano San-

By Leased Wire to Evening Herald.

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Las Vegas — New Mex.



He pays for his vanity. The man who buys a heavy car sacrifices good dollars to misplaced pride. The prudent buyer invests in the dependable Ford. He knows it will serve him best—and at lowest cost.

Five hundred eighty-five dollars is the price of the FORD roadabout; the touring car is six thirty-five; the town car is eight thirty-five—*f. o. b.* Albuquerque, complete equipment. Get catalog and particulars from **QUICKEL AUTO & SUPPLY CO.**, Albuquerque, N. M. Phone 756.

REQUEST MADE FOR BAD ROADS GREAT HINDRANCE TO THE SCHOOLS

Members of the Church Board Seek Scalp of Fighting Minister Because He Changed Name of Church.

FRIENDS IN CHURCH RALLY TO HIS SUPPORT

A general meeting of the members of the Gold and Broadway Church of Christ, or Christian church, has been called by the pastor, Rev. Hermon E. Williams, for next Tuesday night at 7:30 o'clock, to determine whether the minister shall be asked to resign his charge.

The meeting has been called with the consent of the church board, after a majority of the members of that board had asked Mr. Williams to resign, basing the request on the charge that he has, without authority, changed the name of the church from the "Christian" to the "Church of Christ." This is the members of the church board object to, and this, as far as could be learned today, is the only campaign just closed, having led the voting Democratic delegates from the First and Second wards out of the Democratic city convention.

Williams, during his stay in Albuquerque, has been an active agitator for social reform. As the editor of the "Doorkeeper," a weekly publication he devoted himself editorially to various attacks upon everything not in harmony with his views, and took a leading part in the only campaign just closed, having led the voting Democratic delegates from the First and Second wards out of the Democratic city convention.

Although there are many members of his congregation who objected to his action, he has been successful in getting his plan adopted. The church board, and that a large majority of the members of the Gold and Broadway church will vote to ask him to remain in charge, the call to the church having been unanimous, and there being comparatively few who do not approve of the minister's general policy, and who consider the name of the church a minor matter so long as its work is carried out.

The minister will come up for settlement of his congregation next Tuesday night. Friends of the minister asserted today that a large majority of the members of the Gold and Broadway church will vote to ask him to remain in charge, the call to the church having been unanimous, and there being comparatively few who do not approve of the minister's general policy, and who consider the name of the church a minor matter so long as its work is carried out.

TYPHUS EPIDEMIC IN WEST PART OF COUNTY CHECKED

Prompt Action by Superintendent Lonergan and Assistants Prevents Dangerous Disease Among Navajos.

Prompt action by Superintendent P. T. Lonergan of the local Indian agency, Dr. L. C. Day, the agency physician and their assistants has effectively checked what threatened to be a very serious epidemic of typhus fever never before among the Indians living in the western portion of the state. The epidemic was first reported three weeks ago to Dr. L. G. Rice, president of the state board of health, by Dr. Day with a request that the county health authorities be required to take action.

The county refused to act and Superintendent Lonergan, who is in charge,

had the Indians placed in a hospital, where forty carpenters aboard the large, which carried 2,600 tons of mining machinery and supplies for a mine near here.

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